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1929, #6
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DELAWARE STATE MEDICAL JOURNAL

*Owned and Published by the Medical Society of Delaware
Issued Monthly Under the Supervision of the Publication Committee*

Volume I
Number 6

JUNE, 1929

Per Year \$2.00
Per Copy 20c

THE CANCER SITUATION: 1929

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THE CAUSE OF CANCER

The cause of cancer is not known. Most of the theories formerly held are probably untenable. When the cause of cancer is discovered it will probably prove to be an intrinsic disease of cell life, most likely nuclear, and probably following multiple physiochemical disturbances. Should this be the case, it will demonstrate the correctness of the present belief that cancer is neither hereditary or contagious. We know already that cancer always begins as a local disease, and is therefore 100% curable, provided the diagnosis and treatment are instituted early enough.

THE DIAGNOSIS OF CANCER

The diagnosis of cancer, if it be in the skin or superficial parts, can be made clinically with reasonable assurance early enough for effective treatment. This is not the case when cancer is in the interior of the body: here there may be few or no symptoms till the cancer has reached an age and size that renders treatment of relatively small value. Even when symptoms arise, the true nature is not always suspected, and precious time is then lost waiting for the classical or text-book picture, by which time the case may not be amenable to treatment. In any event, any unusual train of symptoms should be regarded with suspicion, and the patient subjected to the most thorough examination available, even to the extent of an exploratory operation to reach and examine the suspected area. Only in this way can cancer be detected early enough to give the patient a decent chance for his life. In any case in which there is an element of doubt, a biopsy should be performed in order that the microscope may establish definitely a diagnosis, and a prognosis. Cancer cannot be diagnosed earlier than we now do until (1) research establishes more refined and accurate methods; and (2) education of the public, (and profession) procures greater co-operation.

Earlier clinico-pathological diagnosis will, ipso facto, materially decrease cancer morbidity and mortality.

THE TREATMENT OF CANCER

Despite the current public belief, the treatment of cancer is making definite progress, even though the cause remains unknown.

The treatment varies with the type of tumor; the cancer of epithelial origin (carinoma) differs somewhat in its reactions to treatment from the cancer of mesothelial origin (sarcoma). The usual methods of treatment have been:

1. Physical
 - Radiation
 - Radium { Element
 - X-ray { Emanation (Radon)
 - { High Voltage
 - { Low voltage
 - Thermic
 - Cautery
 - Coagulation
 - Disiccation
 - Fulguration
2. Chemical
 - Injection
 - Selenium
 - Arsenic
 - Mercury
 - Gold
 - Lead
 - Local
 - Arsenic
 - Zinc
 - Phenol
3. Biological
 - Serums
 - Vaccines
 - Extracts
4. Surgical
 - Diagnostic
 - Therapeutic
 - Palliative
 - Radical

Of these, the chief reliance has been upon surgery, x-ray, and radium, in the order named. In cases at all suited for operation, no method as yet has approached the end-results obtained by competent, early, radical surgery. Inoperable or borderline cases are best treated by radiation, with the x-ray much more available than radium, though not equal to the latter in its effect upon certain tumors. The amazing thing is that in no form of radiation has there yet been evolved a standardized technique. This may not be necessary, for the end-results of varying techniques closely approximate each other. However, we feel that standardization is desirable, especially when

we recall that the superior results of surgery have been attained largely through standardization of the operative technique.

The whole field of radiation may soon undergo radical changes, due to the recent invention of Dr. Coolidge of a new high-voltage tube (300,000 volts) which has a radio-active power equivalent to that of one ton of radium. The possibilities of such a tube are apparent when we consider that in the whole world there is less than one pound of radium element. However, means must yet be found to put to practical use such a powerful agent. At the same time, radium treatment has not yet reached its maximum; used in larger amounts and with a standardized technique improved results are to be expected.

The thermic methods generally utilize some form of electrical energy. They possess certain advantages over the other methods, in that the tumor is gradually removed while at the same time both the blood and lymph circulations are blocked off. They are frequently used, like radium and x-ray, as adjuvants to surgery. Considerable improvement and invention is to be expected in this field, so much so that ultimately thermic methods may dominate the treatment in certain portions of the body.

The chemical methods have fallen largely into disuse. Those given by injection have usually been colloidal suspensions of the heavy metals. We remember the early days of the solenium injections; we found them ineffective. Then followed arsenic, mercury, and gold, likewise ineffective. In recent years there has been much discussion of the lead treatment of Bell, who claims to have achieved some cures, chiefly in uterine cancer. The chief obstacle to the lead, as to all those heavy metals, is its toxicity. Whether chemical research can evolve a colloidal product of sufficiently low toxicity to be effective remains for the future. This applies with equal force to investigations in arsenic and mercury. In chemical therapeutics, the surface has merely been scratched, yet it has already produced such indispensable drugs as salvarsan, mercurochrome, caprokol, etc., for injection, chiefly by the intravenous route, for other diseases. These researches should be extended to cancer. The chemicals used locally in cancer have been incorporated into various escharotic pastes, and are therefore applicable only to external lesions. Even here, they have fallen into certain disrepute

because they so frequently remove the mass, but leave cancer in the remaining wall; and because they have been the sine-qua-non of the cancer quack.

The biological methods have been conspicuous by their paucity, and for their ineffectiveness, with one notable exception, Coley's fluid. This is a vaccine containing the toxins of the streptococcus of erysipelas and of the bacillus prodigiosis, and is without doubt an effective agent in some cases of sarcoma. However, the other biologicals, such as the serum of cancer patients, extracts of tumor masses, extracts or suspensions of embryonic tissues, etc., have been totally unsuccessful in the treatment of cancer. But we must admit that research of a biological nature has been limited both in extent and character, due largely to the time and expense involved, but such work as that of Slye, Loeb, Carrol, Rous, etc., bids fair ultimately to teach us the innate character of the cancer cell, and thereby perhaps the cause of cancer, and when we reach that point, the cure for cancer will probably not be far off.

In the best clinics no one method of treatment is relied upon exclusively; usually there is a combination of surgery, x-ray, and radium, with or without thermic treatments. This composite treatment has produced the best statistics, despite the fact that when first applying to the clinic, 30% of all cases are hopelessly incurable; 40% are late lesions with metastases, and for the most part are incurable; leaving 30% favorable for treatment, of which 5% to 90% can be cured, according to type, location, duration, and size. This means that 1.5 to 27% of all cases seen at the clinics can be cured, a fact not generally recognized.

CANCER CLINICS & INSTITUTES—EUROPEAN

Cancer is treated in nearly all the general hospitals in Europe, of which the majority are publicly owned and operated. Certain hospitals have special departments or clinics, for the most part under university control. There are a few special hospitals or institutes that treat cancer only, nearly all under government auspices, with university control. None of these clinics are large; the one at Paris has 18 beds, Copenhagen has 24 beds, Bordeaux has 60 beds. Other special clinics are at Amsterdam, Geneva, Hamburg, London, Louvain, Milan, Toulouse, and a few

other medical centers. These clinics employ surgery, x-ray, and radium, for which they have 3 to 6 pieces of high voltage (200,000) x-ray, and radium varying from 1.3 grams at Lyons to 4.0 grams at Paris. The European average is 1.0 gram. None of the European clinics is ideally housed or organized, though some of them have evolved a very efficient system, with a splendid personnel. The character and teamwork of these clinics is most notable in France. Bell has a clinic of outstanding prominence at the University of Liverpool, where the work centers chiefly about his injections of colloidal lead. His end-results are not appreciably better than those of the other clinics, and the patients must be selected with extreme care.

Wherever one finds a clinic for the treatment of cancer one will also find some research, generally in treatment, though some of the university clinics are also engaged in researches into the cause of cancer. Practically without exception, the European clinics suffer severely from a lack of funds, which is reflected in their buildings, equipment, shortage of beds, and restricted personnel. Most of them depend upon government appropriations; a few of them have small independent endowments. We feel it safe to say that nowhere in Europe is there a really complete cancer clinic or institute. Their present attitude, doubtless due to the war and its sequelae, seems to be that such a proposition is so very expensive that they will have to yield this opportunity to America.

CANCER CLINICS & INSTITUTES—AMERICAN

The situation in America closely parallels that in Europe, except that our clinics are not usually dependent upon the government, they average less radium per clinic, the personnel is slightly larger, and the budgets are larger. The American clinics are chiefly in Boston, Pondville (Mass.), New York, Buffalo, Philadelphia, Baltimore, Atlanta, St. Louis, and Rochester (Minnesota). Of these clinics the largest and perhaps the outstanding one is the Memorial of New York, which has approximately 4 grams of radium, and a plant and endowment totalling approximately \$5,000,000, together with a personnel of physicians, surgeons, physicists, pathologists, etc., second to none in America, with the added prestige of being the cancer department of Cornell University.

The cancer hospitals total 15, with a capacity of 1012 beds, of which 651, or 64% were occupied last year. It is apparent that the cost to the patient is the chief, if not the sole, reason why of this small number of available beds one-third were empty. In addition, there are approximately 40 homes for the incurables, with a bed capacity of 3436, of which 86%, or 2955 were occupied last year. Most of the inmates were suffering from cardiac, renal diabetic, or some similar chronic affection, but some were doubtless victims of cancer. If we assume that this number was about 350, there were then last year a total of only 1000 cancer patients in cancer hospitals and homes for incurables.

There are approximately 100,000 cancer deaths in the United States per year, and it is estimated that the number of cases is three times the death rate, i. e., there are always on hand around 300,000 cancer patients. The remaining cases must be hospitalized temporarily, if at all, in the wards of the general hospitals. It is estimated that 2% of all types of patients find their way to the hospitals, hence, the general hospitals probably house approximately 6,000 cancer patients, making a total of 7,000 out of the 300,000, a manifestly ridiculous percentage for a prosperous country. On the other hand, about one-third of the cases will not require hospitalization, so that the net situation here is that roughly 3% (7,000 out of 200,000) of the cases that need hospitalization get it, and the 97% go without it.

CANCER PUBLICITY AND PROPAGANDA

Cancer research and clinical work is reported to the profession through most of the general journals, and also a few special ones, of which the leaders are: *Journal of Cancer Research*, *Cancer Review*, (New York); *Tumori* (Rome); and the *Zeitschrift fur Krebsforschung* (Berlin). Campaigns and clinics for the education of the general public appear periodically under the auspices of the various medical schools, hospitals, medical societies, most of which find their coordination in the American Society for the Control of Cancer.

There are a few cancer research foundations, such as the Crocker of Columbia University, which are engaged chiefly in laboratory research, primarily into the cause and nature of cancer, but for the most part they are not intimately

connected with an institute for clinical research. This lack of completeness or coordination is in itself a serious handicap. However, the workers, rather than the institutions, find their chief coordination in the American Association for Cancer Research. Even if there be no further research, either clinical or laboratory, etiological or therapeutic, it is to be expected that the gradual education of both the profession and the public to a fuller realization and utilization of the facts already in hand will slowly turn the tide and bring about a gradual decrease in cancer mortality, which has increased 50% in the last 25 years.

OUTLINE OF A COMPLETE CANCER INSTITUTE

A complete institute would contain two broad divisions: research, and clinical. In the research division the following departments are necessary: physics, with subdepartments in electricity, radio, radium, x-ray; biology, including genetics and heredity; chemistry, including inorganic, organic, and colloidal or physical; physiology; pathology; bacteriology; internal medicines; surgery; statistics, including anthropology and epidemiology; and library. Each of these departments should have proper laboratory space and equipment, an efficient personnel, and a sufficient endowment.

The clinical division would consist primarily of a hospital for the treatment of in- and out-patients of all classes, full pay, part pay, and free, white and black, male and female. In addition to clinical treatment clinical researches must be conducted, for which additional laboratory space must be provided, preferably in juxtaposition to both the wards and to the research laboratories. As a matter of fact, the ideal building would have its wards and laboratories closely interwoven, so as to save time, space, energy, and equipment. It should also be used as a teaching institution, and provide facilities therefor. The subdivision of the clinical departments would depend largely upon the personnel obtained, but should follow closely the departmental setup of the research division.

The personnel would have to be recruited from a world-wide survey, and of these at least the director must have an international reputation; in fact, most of the departmental heads should be men of the same calibre. The personnel of

the research division, and most of those in the clinical division, should be full-time workers and paid an adequate salary. It may be desirable to have no part-time clinicians, in which case all fees for clinical treatment would accrue to the institute. This would entail large salaries, but the proper men would earn considerably more than their cost.

The institute should be closely affiliated with a university, and preferably an integral part of one. It should be in a city that has ample hotel and boarding house facilities, for the families of patients. The advantages of a close connection with a university, with good departments of physics, chemistry, and biology, plus a first class medical school, are obvious. Such a connection also secures in advance such accessory hospital facilities as nurses' home, power house, and laundry, and perhaps general kitchens, reducing both the cost of original plant, and of maintenance. Finally, if at any time the cause of cancer be found, and research in that field no longer necessary, the laboratories and wards of the institute could be converted to other hospital purposes with the minimum of economic wasteage.

COST OF A COMPLETE CANCER INSTITUTE

To provide sufficient clinical material there should be at least 200 beds for patients, which may best be placed in two wings of two stories and basement, tied together in a H- or U-shaped building by a central laboratory unit of three stories and basement. Such a building would contain approximately 1,700,000 cu. ft., and would be a self-contained institute and hospital, except for a nurses' home. The estimate below does not include land, the cost of which will vary according to the location, but since the building is figured at \$1.20 per cubic foot, (an admittedly high figure: the building could probably be erected for approximately 90 cents per cubic foot), the estimate is liberal enough to absorb the reasonable cost of land, except in the largest cities.

1. ORIGINAL COST

Main Building (210 patients)	\$2,000,000
Equipment	700,000
Nurses' Home (capacity 125)	300,000
Plant	\$3,000,000

2. ANNUAL COST

Beds	30 Private: self sustaining-cost, nil: profit, nil (?)	
	60 Semi-private: half sustaining-cost 750. each per year	\$ 45,000
	120 Ward or free non-sustaining-cost 1500. each per year	180,000
Staff	40 Full-time: average 6000 yr.	240,000
	30 Part-time: average 2400 yr.	72,000
	Miscellaneous & Contingent	63,000
	Annual Deficit	\$600,000*

* Less clinical fees, if any.

3. TOTAL COST

If the annual deficit is to be met by endowment instead of annual contributions, the total cost is:

Endowment (600,000 cap'd at 5%)	\$12,000,000
Plant, not (?) including land	3,000,000
Complete Institute	\$15,000,000

RESPECTING YOUR M. D.

BY

CARL SCHEFFEL, M. D., LL. B.
DETROIT, MICH.

Doctors of medicine deem themselves to have attained standards of educational qualifications far above those of any other class of practitioners of the healing art—and justly so.

The struggles that have been waged for long years to attain this standard, and in more recent years to maintain it, have been fought with untold hours of hard work on the part of past and present leaders of the medical profession. But when one observes the nonchalant, nay, even careless manner in which many doctors of medicine handle that which their coveted degree stands for, grave doubt arises as to whether or not they appreciate what their callousness in this respect is leading to.

If the degree of M. D. is worth working hard and earnestly for from four to seven years to attain; and if that degree represents the very highest standards among those practicing the art of healing, then it is worth respecting and using.

However, as we look about us, we soon encounter manifold instances showing that this degree is being treated with carelessness and indifference by members of our own profession, so that we really have no just cause for complaint when it is treated with disrespect or even contempt by the laity.

Only recently, after pointing out in a medical publication that in a certain state where undergraduates were once examined for medical licensure, that such licensure of itself conferred no degree nor right to have its holders on that ac-

count designate themselves as doctors, a past president of a state medical society replied thereto thanking me for directing attention to that matter on a letter-head containing nothing enabling me to distinguish him from a doctor of chiropractic, doctor of naturopathy, or what not! Are doctors afraid or ashamed to append the initials of M. D. after their names?

Thirty or forty years ago when the term doctor was used almost exclusively in connection with the practice of medicine, that prefix may have been adequate and justified; but in these days of doctors of medicine, osteopathy, optometry, chiropractic, naturopathy, psychopathy, and others, all using the word doctor in connection with some branch of the healing art, such loose and abstract terminology is the means of contributing more of the existing disrespect for the medical profession than many may suppose.

It is the duty of every M. D. to so designate himself in the eyes of the world by specific terminology that he may readily be distinguished and differentiated from the numerous cultists who also have the right to call themselves doctors, but not M. D's.

It is true, in a number of states, laws have been enacted aiming to prevent confusion of the meaning of doctor in relation to the practice of the healing art by seeking to prevent any but licensed M. D's. from designating themselves as doctors. Such laws are about as "wet" as prohibition is "dry," in fact they are an utter waste of energy because a single test in the highest court of the land will disclose their unconstitutionality.

The fact must not be lost sight of that the word doctor simply means learned; and while it is usage recognized in law that a doctor generally possesses a degree conferred by an incorporated institution having degree-granting powers among its charter privileges, that fact by no means carries with it the logical or legal implication that doctors are necessarily in any way associated with the practice of any branch of the art of healing. Doctors of law, literature, divinity, philosophy, science, and others have fully as much right to call themselves doctors as do M. D's., without at the same time being interested in the practice of the healing art.

Moreover, a doctor's degree, whether that be in medicine, osteopathy, chiropractic, naturopathy, or any other cult, constitutes personal

property, and as such, its owner cannot be arbitrarily deprived of its use and enjoyment in the manner set out by the laws of some states without conflicting with the owner's constitutional rights. Many of these statutes have entirely ignored the most important fact that doctor's degrees may be used in many ways other than in connection with acts that can possibly be construed as practicing any branch of the healing art; and that is why many of them would be found unconstitutional upon final test.

In this connection, legislation aimed at depriving the legitimate holder of a doctor's degree of his fundamental rights will never remedy the condition; but legislation aimed to compel every practitioner of the healing art, *including M. D's.* to append those specific designations to their names which enable the public to determine at a glance what branch of the healing art any given doctor practices, would be constitutional and would be a great help to the medical profession and the public alike.

Any M. D. who has travelled to any extent well knows that in some parts of the country when a stranger learns that he calls himself a doctor, the question soon is asked—"What kind of a doctor are you?" If such experiences are not in themselves of sufficient significance to point to "the hand-writing on the wall" of the importance of encouraging and fostering the differentiation of medical practitioners from cultists, then those who fail to see the light are either suffering from myopia or have their heads buried in the sand like ostriches.

From far and wide the medical literature of recent date decries and deplores the fact that M. D's. are losing the respect and confidence of the public. Improvement can come only from within the ranks of medicine. Too much energy is being consumed in magnifying real and creating fancied shortcomings alleged to exist in connection with obtaining the degree of M. D., and far too little attention is being paid to ways and means to increase public respect for that degree after it has been obtained. Practitioners of medicine should be encouraged, coerced, compelled, or forced to append the initials of M. D. to their names whenever and wherever their name appears in writing, and not be permitted to simply designate themselves as doctors, which in the eyes of the public is more and more tending to place them on the same level as those

cultists who have a similar right to call themselves doctors. This is essential as one link in the chain that must be welded in order to retain the respect and dignity of the medical profession. Does the shoe pinch YOU?

INDICATIONS FOR THYROIDECTOMIES, AND POSTOPERATIVE RESULTS*

Remarks Concerning the Use of Iodine.

CHARLES H. FRAZIER, M.D., Sc.D.

PHILADELPHIA, PA.

Although Philadelphia is not in a goitre belt, the increasing incidence of cases of exophthalmic goiter and toxic adenoma coming into the University Hospital made it necessary to establish a Thyroid Clinic in order that this highly specialized group of patients could be given adequate care and proper study. The organization of the Clinic comprises an in and out-patient department, and includes personnel from the x-ray surgical and medical departments, all of which work in harmony.

As representatives of surgery in this group, we are perfectly aware that a medical and a roentgenological form of treatment exists which in a restricted field serve, a very useful purpose.

We are especially interested in the toxic varieties of thyroid disturbances and the remarks in this paper will be confined chiefly to this group. Toxic thyroids may be divided into two main groups; the hyperplastic toxic thyroid or exophthalmic variety, and the toxic adenoma. The exophthalmic types usually occur in younger people, their symptoms are of relatively short duration and the gland is diffusely enlarged. The classical symptoms are: bulging eyeballs, nervousness, loss of weight and palpitation, but they are by no means constant. Exophthalmus is present in only about 50% of the cases. We frequently see cases in which there has been no loss in weight or there may even have been a gain. Enlargement of the thyroid is not even essential, and we have seen patients with metabolic rates above sixty without any local evidence of thyroid disease. Perhaps one of the most frequent findings is an increased pulse rate.

The best criterion of toxicity in goiter is an increased metabolic rate, although this sometimes

* Read before the New Castle County Medical Society, Wilmington, Del., Nov. 20, 1928.

fails us and we make the diagnosis on clinical findings.

In cases in which the symptoms are mild and the patient not particularly incapacitated, medical and x-ray treatment in proper hands, and under intelligent guidance, particularly if the patient is economically well situated, is perhaps justifiable. However, it may be said from a surgical point of view that our most striking results are obtained in those cases which are sent to us early in the stage of their disease. Analogous logic is of course well known in the surgeon's dictum to operate for appendicitis as soon as the diagnosis is made. The longer unsound palliative measures are persisted in, the greater is the likelihood of visceral damage.

It is from the group of patients whose toxicity is of relatively long duration, either from procrastination on their part or from deficient medical advice, or improper diagnosis, who develop complications and constitute the "bad risk" group from which our mortality of 1% is derived.

Patients with toxic adenomata usually give a history of "lump in the neck" which they have had for years without symptoms, but in the later decades of life they begin to complain of increasing dyspnea, palpitation, loss of weight, nervousness and the other symptoms which go along with toxicity. It is in this variety that cardiac damage so frequently occurs because of the insidious onset of toxicity. It has been our experience that toxic adenomata do very poorly under medical treatment and surgery is the only means of cure. Nodular enlargements of the thyroid in our estimation are surgical cases whether they are toxic or non-toxic. All nodular enlargements are potentially toxic and Smith and Clute report 94% of their malignancies of the thyroid as having occurred in people who gave a previous history of adenoma.

With the introduction of Lugol's solution in 1922 by Plummer as a preoperative measure in the preparation of exophthalmic patients, iodine has had a greatly increased vogue and its use has been erroneously inflated to include it as a means of prolonged medical treatment with the hope of actual cure of the disease. We have never seen a case of hyperthyroidism cured by the use of iodine. On the contrary we believe that iodine acts only as a temporary damper on thyroid activity, the preoperative usefulness of which is

greatly impaired if the patient has previously received iodine over a long period of time. The protracted use of iodine in a patient has therefore a distinct tendency to increase the operative mortality.

By our preoperative Lugol's regime of ten minims twice daily we expect to get a 50% reduction in the basal rate within eight days to two weeks. The general improvement at the end of this time is striking. The nervous, twitching, apprehensive patient has been transformed into a much more docil individual who no longer dreads an approaching operation but often urges us on to quicker action.

It is now generally accepted that Lugol's is effective in controlling cases of toxic adenoma preoperatively, but to a slightly less extent than in the exophthalmic type.

Iodine has practically eliminated the many stage operations so that polar ligations are now a rarity. In the sickest patients, however, we have found the two stage operation of distinct value. One lobe is removed at the first operation and the patient is told to return in eight weeks, at the end of which time there is usually a decided gain in weight with a general amelioration of all symptoms, making the second stage operation relatively safe.

Iodine is of benefit in other forms of goiter but it is beyond the scope of this paper to more than sketch its varied use.

Its prophylactic use in the prevention of endemic goiter is familiar to all. It also has a field in the treatment of those physiological enlargements which occur at puberty, pregnancy and the menopause and is also of some value in the treatment of an already existing endemic goiter although no striking results are likely to be obtained.

Complications arise, as has been said before, when the disease is permitted to go on untreated. The complications which chiefly concern us are those related to the heart. In the early stages of toxicity there is a simple tachycardia which manifests itself to the patient by the symptom of palpitation. As time goes on the heart dilates from continuous overactivity and systolic murmurs which are purely functional are frequently heard over the precordium. Increasing dyspnea and evening swelling of the legs follow as mild symptoms of beginning decompensation. Disturbances in cardiac rhythm are quite frequent

and it has been said that thyrotoxicosis is the commonest cause of auricular fibrillation.

The development of mild symptoms of decompensation or auricular fibrillation do not contraindicate surgery but do indicate a more prolonged preoperative medical treatment. If the case is considered an extremely bad risk, radium and boiling water injections may be resorted to in an effort to get the patient in better shape for the surgeon's knife which is the only real hope of relief. The degree of rehabilitation after surgery in advanced cases with cardiac decompensation, is often astonishing and we feel justified in operating even though the risk is considerably greater. It is only in these cases in which we are fairly certain of a fatal outcome that we refuse to operate.

During the clinical course of a case of exophthalmic goiter thyroid crises may occur which are simply exacerbations of thyroid toxicity and have as their striking symptoms nausea, vomiting and diarrhea, combined with a general increase in all of their complaints. Large doses of Lugol's solution are usually effective and surgery is indicated, as soon as the acute symptoms have subsided.

Among the conditions which may be associated with hyperthyroidism tuberculosis is of especial interest because it also offers a problem in differential diagnosis. It is only the mildly toxic thyroid patient who is to be confused with the tuberculous one and with adequate study, x-ray examinations and metabolic determinations, the diagnosis can be easily made. When frank hyperthyroidism is combined with active tuberculosis, surgery is clearly indicated for without relief, food is being burned so rapidly by the racing motor that there is little hope of putting flesh on the patient, a most desirable thing in the treatment of acid fast conditions.

A careful history, physical examination, chest x-ray and metabolic studies will usually serve to differentiate toxic goiter from neuro-circulatory asthenia, neurasthenia, sympatricotomia, tuberculosis and a few of the other conditions which at first may seem confusing.

A decreased sugar tolerance with occasional traces of sugar in the urine is a common finding in exophthalmic goiter and does not mean diabetes as a normal blood sugar is the usual finding. True diabetes is occasionally found and is treated as a complicating factor by the medical con-

sultant. The diabetic condition may be somewhat benefitted by operation but cure can not be expected.

We have occasionally seen cases of arthritis associated with thyrotoxicosis apparently related to the thyroid or parathyroids as they have been relieved by operation.

In general we may say that there are no contraindications to surgery in toxic thyroids except when the prognosis of the complicating factor is such that surgery directed at the thyroid would not prolong the life of the patient.

Our routine preoperative regime consists of rest in bed, sedatives such as luminal and bromides, Lugol's solution, a high coloric diet, plenty of fluids and proper regulation of the bowels.

With the advent of the proper use of iodine we are no longer so acutely concerned with the mortality of the operations but are now focusing our attention on the morbidity statistics which are of more concern to the medical profession as a whole as this offers a means of comparison with other methods of treatment which have been advocated.

In a follow up study, 71% of the exophthalmic group of patients were completely restored to health, 19% were restored to full economic usefulness with normal metabolic rates, but with certain persistent residual symptoms such as nervousness, palpitation and exophthalmus; 6% of the cases were entirely cured of their hyperthyroidism but were seriously handicapped by persisting visceral damage. This group is largely composed of patients who were operated on late in the stage of their disease. Four per cent developed recurrences. There are few examples in surgery where 90% of patients are restored to economic usefulness.

In the group of patients comprising the toxic adenomata, the results are even more striking, 87% being completely relieved of all evidence of the disease; 8.7% were able to return to their usual work but had a few remaining symptoms; 4.3% were relieved of their toxicity but due to coexisting visceral damage were seriously handicapped. No recurrences were present in this group.

Our plea for early diagnosis and adequate treatment can therefore be emphasized from two points of view; that of lowering the mortality, and also the morbidity.

MEDICAL LEGISLATION DELAWARE, 1929

The following report was read by Dr. M. A. Tarumianz, chairman of the Legislative Committee of the New Castle County Medical Society, before that Society at its May meeting:

About two years ago, at the annual session of the Medical Society of Delaware, I presented a resolution concerning the need of a Psychopathic Ward and a Mental Hygiene Clinic in this State, which was accepted and approved by the Society. At that particular time we also requested the members of the Society to prepare the Senators and Representatives of their respective districts to support such bills when presented to the Legislature. In connection with this we presented another resolution embodying the teaching of neurology and psychiatry to the nurses. This included two months of training in psychiatry and nervous diseases in some special hospital. This particular resolution also was passed. In other words, two years ago the Medical Society of the State of Delaware approved on a principle the establishment of a psychiatric observation clinic, a mental hygiene clinic in this State and psychiatric and neurological training of nurses.

At the last session of the Legislature we prepared special bills in regard to those new departments. The first bill was to establish a Mental Hygiene Clinic. The bill reads as follows:

An Act to authorize the establishment of a Mental Hygiene Clinic under the direction and control of the State Board of Trustees of the Delaware State Hospital at Farnhurst.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF DELAWARE IN GENERAL ASSEMBLY MET:

Section 1. The State Board of Trustees of The Delaware State Hospital at Farnhurst is hereby authorized and empowered to establish a Mental Hygiene Clinic to be composed of such professional assistants as may be recommended by the Superintendent of the said State Hospital. The Superintendent of the said Hospital shall be the directing head of said clinic and he is hereby constituted State Psychiatrist and Criminologist. It shall be the duty of the said clinic to examine all children within the State, attending any public or private school, who are two or more years retarded, when so requested by the superintendent or other executive head of such school. The said Mental Hygiene Clinic shall likewise undertake and carry on a continuous survey and examination of all feeble-minded. The said clinic shall have power to observe, examine, study and treat the inmates of any institution supported in whole or in part by the State of Delaware, or any county thereof, and shall likewise have power to observe, examine, study and treat any person charged with any offense in, or subject to the provision of, any Court within the State, when requested so to do by the judge or judges thereof. The said clinic shall likewise have power, when requested, to extend its psychiatric services to all social agencies of the State, general hospitals and all institutions for the feeble-minded for the purpose of the discovery and treatment of mental disorders.

Section 2. The said Mental Hygiene Clinic shall have power through the State Psychiatrist and Criminologist to apply for the commitment of any person to the Delaware State Hospital at Farnhurst under any existing or future laws of the State of Delaware relating to such commitment.

This bill was passed by the Legislature and approved by the Governor.

We hope to be able to establish this particular mental hygiene clinic unit in the month of July. The unit will consist of a psychiatrist, psychologist, psychiatric social service worker and nurse-clerk. There will be three centers outside of the State Hospital for this particular unit. The State Hospital will have special quarters consisting of four or five rooms for the mental hygiene work. There will be quarters in Wilmington, Dover, and Georgetown. The unit will spend certain days in various institutions. We hope to be able to examine every inmate of the Workhouse and other state or county institutions.

This Mental Hygiene Clinic will also be a child guidance clinic; that is, this unit will offer expert medical, educational, and social advice concerning certain types of children who present behavior problems at home, in school, or in the community, either because of disciplinary difficulties, slow school progress or other reasons. The cases will be referred by school authorities, welfare agencies, social workers, children's courts, judges, physicians, and others. The clinics will be held at intervals in various communities, and a report embodying the result of the examination and the recommendations will be presented to the person who referred the case.

The next bill which was presented to the Legislature was to establish a Psychiatric Observation Clinic in this State.

Almost every state in the Union has some psychopathic ward connected with their general hospitals. As it is here, patients are committed to the State Hospital only on a single examination of two physicians. Many of the border line cases require a week or two or even more of observation before the actual mental status can be decided upon. In spite of our better understanding of mental illnesses and kindlier attitude towards these mental cases, there still exists a certain stigma to those who have been legally committed to any State Hospital, and this stigma clings to them, even after their discharge and harms them not only socially but also economically. This clinic will be a special unit under the supervision of the Superintendent of the State Hospital. Any reputable general practitioner to this hospital for observation, study and psychiatric titioner may send his doubtful mental and nervous cases diagnosis, after which it can be determined whether such cases are fit subjects for legal commitment to the State Hospital.

For the establishment of such a psychiatric observation clinic the following bill was presented at the last Legislature:

An Act authorizing the establishment of a Psychiatric Observation Clinic at the Delaware State Hospital at Farnhurst.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF DEL- AWARE IN GENERAL ASSEMBLY MET:

Section 1. The State Board of Trustees of the Delaware State Hospital at Farnhurst are hereby authorized to establish under the direction and supervision of the said State Hospital a Psychiatric Observation Clinic for the observation, study, psychiatric diagnosis and treatment of persons suffering from mental and nervous diseases. Any physician licensed to practice medicine within this State may, upon compliance with the rules and regulations of the said State Board of Trustees made from time to time, cause any patient under his care or treatment, who is suffering from mental or nervous disease, to be admitted to said clinic for a period not to exceed four weeks at any one time for observation, study, diagnosis and treatment. Any patient so admitted shall remain in said clinic for a further period or periods not to exceed four weeks duration each, upon the request of the physician upon whose application such patient was admitted to said clinic and with the approval of the said State Board of Trustees. Any person who shall be admitted into such clinic shall not be allowed to depart therefrom prior to the expiration of such four weeks

period, or any extension thereof, in case any such extension shall have been made, without the consent of the Superintendent of the Delaware State Hospital.

This bill was passed and approved by the Governor.

We expect to complete this building by July 1st, 1930, on the new property of the State Hospital which is some distance from the main buildings.

To establish the above departments we had to present another bill to the Legislature, which provides an amendment to the old law of commitment of the mental cases to the State Hospital.

The following bill, which was presented to the Legislature, was passed by the same and approved by the Governor:

An Act to amend Section 6 of Article 1, Chapter 76 of the Revised Code of Delaware relating to admissions to the Delaware State Hospital at Farnhurst.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF DELAWARE IN GENERAL ASSEMBLY MET:

Section 1. That Section 2598 of the Revised Code of Delaware, being Section 6 of Article 1 of Chapter 76 of the Revised Code of Delaware, be and the same is hereby amended by striking out all of said Section and inserting in lieu thereof the following:

2598 Section 6. **INSANE PERSONS; HOW ADMITTED:**—No person shall be received as a patient for permanent detention in the Delaware State Hospital at Farnhurst, except as follows: a certificate shall be made and signed by at last two physicians, residents of this State, who have been actively engaged in the practice of medicine for at least five years theretofore and who shall be residents of the same State and County as the alleged insane person, which said certificate shall be filed with the Superintendent of said Hospital. Said certificate shall be made within one week after the examination of such person and within two weeks of the time of the filing of the same with the said superintendent. Such certificate shall be signed by said physicians, who shall also make affidavit to the truth of the facts and statements therein contained, which affidavit may be made before any officer authorized to administer oaths within the State of Delaware.

Upon the filing of such application it shall be the duty of the Psychiatric Observation Clinic of the Delaware State Hospital to observe and study the person mentioned in said certificate and report its findings to the State Board of Trustees of the said Hospital. If the report of the said clinic shall be that the said supposed insane person should be admitted to the said Hospital because of mental disease, the said State Board of Trustees are hereby authorized, empowered and directed to summon a jury of six responsible persons to determine whether such person is suffering from mental disease and should be admitted to the said Hospital, if such jury shall be requested by any person related or connected with such supposed insane person by blood or marriage. If such jury shall not be requested, the State Board of Trustees shall appoint a commission consisting of two qualified and licensed physicians, who shall determine whether such supposed insane person is suffering from mental disease and should be admitted into said State Hospital. The said jury or the said Commission, as the case may be, shall report their findings to the said State Board of Trustees and if the report shall be that such supposed insane person is suffering from mental disease and should be admitted into said Hospital, such report shall be sufficient for the commitment of such person, subject to the right of appeal hereinafter provided. No investigation by the said Jury or Commission shall be had except in the presence of the said supposed insane person and the said jury or Commission shall have power to take testimony and administer oaths.

The said supposed insane person or any person related to or connected with him by blood or marriage, shall have the right of an appeal from the findings of said Jury or Commission to the Chancellor of the State of Delaware within ten days from the filing of the report of such jury or commission with the said State Board of Trustees. The members of said Jury or Commission shall receive such compensation as shall be fixed by general rule by the said State Board of Trustees. This Section shall not apply to or be construed to embrace commitments to said Hospital made by any Court of this State, as provided by law.

In addition to those bills which were passed by the Legislature we presented also two amendments to the old sterilization law. These bills read as follows:

An Act to Amend an Act entitled "An Act to Provide for the Sterilization of certain Mental Defectives," being Chapter 62, Volume 33, Laws of Delaware.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF DELAWARE IN GENERAL ASSEMBLY MET:

Section 1. That Chapter 62, Volume 33, Laws of Delaware, approved April 28 A. D. 1923, entitled "An Act to Provide for the Sterilization of certain Mental Defectives" and the same is hereby amended by adding thereto a new section, to be known as Section 4, as follows:

Section 4. Upon the report and recommendation of the Mental Hygiene Clinic of the Delaware State Hospital at Farnhurst or the Superintendent of the said Delaware State Hospital that any person who is confined in any institution within the State, which is supported in whole or in part by the State, or by any County thereof, or who is at large, is feeble minded, epileptic or is a chronic or recurrent insane person, the Board of Trustees or other governing body of the Institution in which such person is confined, or the State Board of Trustees of the Delaware State Hospital, if such person is at large, are hereby empowered to make written application to the State Board of Charities for the sterilization of such person; and upon receipt of such application, accompanied by a copy of the report and recommendation of the said Mental Hygiene Clinic or the said Superintendent, the State Board of Charities are hereby authorized to proceed with the sterilization of such person, in accordance with the provisions of Section 1 hereof; Provided, however, that where any mental defective, coming within the provisions of this section, is at large the examining commission to be appointed by the State Board of Charities as provided in Section 1 of this Act shall consist of two physicians, and one alienist of recognized ability.

Section 2. In case this Act or any part thereof should be declared to be unconstitutional, such declaration of unconstitutionality shall not affect the Act aforesaid, hereby amended.

An Act to Amend an Act entitled "An Act to Provide for the Sterilization of certain Mental Defectives."

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF DELAWARE IN GENERAL ASSEMBLY MET:

Section 1. That the Act entitled "An Act to Provide for the Sterilization of certain Mental Defectives," being Chapter 62, Volume 33, Laws of Delaware, be and the same is hereby amended by adding thereto a new Section, to be known as Section 5, as follows:

Section 5. All habitual or confirmed criminals who have been convicted of at least three felonies by any Court of this State or of the United States, or of any other State, shall be subject to observation and examination by the Mental Hygiene Clinic, or the Superintendent of the Delaware State Hospital at Farnhurst. If the said Mental Hygiene Clinic or the said Superintendent

shall, after observation and examination, find that any such person's criminality is caused by mental abnormality or mental disease, a report and recommendation shall be made to the Board of Trustees or other governing body of the institution in which such person may be confined or to the State Board of Trustees of the Delaware State Hospital, if such person shall be at large; and thereupon such Board of Trustees or governing body, as the case may be, is authorized to apply to the State Board of Charities for the sterilization of such person, in conformity with the provisions of Section 1 hereof; provided, however, that where any mental defective, coming within the provisions of this section is at large the examining commission to be appointed by the State Board of Charities as provided in Section 1 of this Act shall consist of two physicians, and one alienist of recognized ability.

Section 2. In case this Act or any part thereof should be declared to be unconstitutional, such declaration of unconstitutionality shall not affect the Act aforesaid, hereby amended.

These two bills were passed by the Legislature, and also approved by the Governor.

It would be folly to try to discuss the matter of hereditary tendencies, and the importance of heredity in feeble-mindedness, epilepsy, mental disease, and so forth. The time will not permit me to go into details of this particular subject. It is known to all physicians and laymen that heredity plays a certain role in our lives. Modern psychiatry considers heredity and environment both of almost equal importance. Heredity transmits the organic conditions; environment develops the functional side of the human being. Therefore, we have to consider both. According to the best statistics of the country over two per cent of the population is feeble-minded. There is no question that we have over 4800 feeble-minded in this State who are at large. We also know, according to the very best authorities, that over 60 per cent of the criminals are either mental deficiency cases, psychopaths, true mental cases, or epileptics. Having this in mind we go back to the main problem. Are we justified to allow a feeble-minded person to have children? If we consider that heredity and environment are the main sources of all our factors in developing good and bad, normal and abnormal, do we expect to have normal children, even if they are born organically normal, in the environment of the above mentioned undesirable elements? Consider for a moment that the child was born perfectly normal, as far as it can be stated, organically and functionally. If we are right that the environment plays a great role in the development of a child, can we expect a normal development in a child who has the environment of feeble-minded parents, relatives, or similar defective people? It is more than criminal to allow such children to be brought up in such environment. Undoubtedly the sterilization law objectors made a very wise statement that those who are undesirable to propagate should be segregated, which is more humane. It seems to me that those advocates of segregation do not consider the economic and present financial conditions of the country. To segregate about 5,000 undesirable persons in this State, will cost over \$15,000,000, with a yearly expenditure of \$2,000,000 for maintenance of these 5,000 people. Besides, is it wise to have separate colonies of certain classes of people instead of trying to utilize these particular forces for general use of the community?

There is another class of objectors who advise us to bring up the children of undesirable element in proper and more desirable environment, which again is very costly and almost impossible to accomplish because of the magnitude of the problem. At the present time the most practical, economical and harmless way to prevent procreation of undesirable elements is to vasectomize the men and salpingectomize the women who come under this category. This particular law has been in existence in

many states. California alone has sterilized over 5,000 cases. At the present time there are over eight states that are trying to pass similar laws. They have copied our bills for this particular purpose.

The advantage of sterilization are recognized by most of the psychiatrists, but have not been accepted and approved by the American Psychiatric Association for the reasons above mentioned. However, it has been accepted as one of the outstanding factors eliminating undesirability of hospitalizing cases that can be allowed to be at large and be more or less helpful and self-supporting members of the community.

These two particular amendments to the sterilization law will allow certain cases who are at large to be sterilized, or others who are now in institutions to be at large after the sterilization. No person can be sterilized unless properly observed, studied and recommended by the Mental Hygiene Clinic at the request of the family physician, Children's Bureau, Associated Charities, prisons, boys' and girls' industrial schools, colonies for feeble-minded, county institutions, etc. The report of the Mental Hygiene Clinic will be presented to the State Board of Trustees of the Delaware State Hospital, which will recommend the same to the State Board of Charities, who appoints, according to the original law, a commission consisting of three physicians, if the person is at large, and two physicians and the superintendent of the institution in which the person is confined. One of the physicians must be an alienist. Considering this complicated procedure to pass a case for sterilization, I am sure that a person who goes under the sterilization law is absolutely and definitely protected, more so than for any other operation equally serious.

DELAWARE PHARMACEUTICAL SOCIETY

NARCOTIC REGISTRATION

The attention of all interested parties, physicians and pharmacists, is called to the fact that Federal permits to either prescribe or dispense narcotic drugs must be renewed before July first next.

All permittees are urged to at once prepare inventories and file the same, together with application for renewal of permit, with the local Collector of Internal Revenue.

In this connection it seems apropos to again print, for the information of all permittees, the following:

Summary of Narcotic Regulations

Keep This Set of Regulations Posted Where They Can Be Referred To

REQUIREMENTS OF HARRISON ACT AND REGULATIONS IN CLASSES 3 AND 5 REGISTRANTS

1. Must register with Collector of Internal Revenue in District in which store is located, on or before July 1 of each year, and must file duplicate inventory of all narcotics in stock.

2. Must post in a conspicuous place Tax Stamps for year in which it is issued.
3. Must at all times, keep records easily accessible for inspection.
4. May dispense only on prescriptions from registered physicians and from broken or open packages.
5. May not dispense in original stamped packages—viz: tubes, etc.
6. May not dispense on Government Order forms except for a 1 oz. aqueous solution, in which narcotic content is not more than 20% of complete solution.
7. May not, under any circumstances, dispense to addicts.
8. May not refill a prescription containing narcotic drugs, unless it comes under exempt preparations requirements. Record of Narcotics so dispensed must be kept.
9. May not fill prescriptions given over telephone or on memoranda.
10. May not fill prescriptions for doctor's office use in office or practice.
11. Prescriptions which call for narcotic drugs must be written in Ink or Indelible pencil.
12. Must keep all narcotic prescriptions on separate file for two years.
13. May not partially fill prescriptions.
14. A prescription may only be filled as originally written, with full name, address and U. S. Registry number of physician executing same.
15. *Must keep record of all exempt preparations sold.* Art. 107. Reg. 5.
16. Must keep narcotic drugs separate from all other stock and under lock and key. Art. 58. Reg. 5.
17. Prescriptions must bear full name, address and age of patient for whom written, also diagnosis of physician,—or Exception 1 or 2 Art. 117 as case may be. Narcotic Pamphlet N-No. 56.
18. A prescription written by a physician in another state should not be filled as druggist can not verify same.
19. Druggists should be very careful about dispensing to a physician on prescriptions written for various patients and with various addresses. Druggists should be very careful about filling prescriptions for same person repeatedly over a period of time, without having a conference with the physician who issues same.
20. All narcotic drugs not in original stamped packages are subject to seizure.
21. A druggist discontinuing business or selling to another druggist may not transfer narcotics unless first obtaining approval of Commissioner of Internal Revenue, making an inventory and filing same with the Collector of Internal Revenue of District in which store is located, or surrender same to narcotic agent of the division in which store is located.
22. If any narcotic drugs are lost or stolen, an affidavit and inventory must be Filed with the narcotic agent in charge. Sec. 59. Reg. 5.
23. IN ADDITION TO THE ABOVE HARRISON NARCOTIC REGULATIONS YOU MUST OBSERVE YOUR STATE REQUIREMENTS.

DOCTORS, ATTENTION

The Delaware Pharmaceutical Society will hold its annual convention at Rehoboth in the Hotel Henlopen, July 9, 10.

On Wednesday, July 10th, at 9 A. M., Stan-

dard time, the following speakers will make addresses and their subjects will be:

Dr. E. M. K. Geiling, Asst. Professor of Pharmacology, John Hopkins University: "Insulin."

Dr. James C. Munch, Consulting Pharmacologist, Biological Survey, U. S. Dept. of Agriculture: "Why Bio Assays."

Dr. John C. Krantz, Jr., Director of Research, Sharp & Dohme Company: "New Drugs on Display."

As these addresses may be of interest to the physicians we invite you to attend this session.

W. L. MORGAN,

President.

NEW CANCER HOSPITAL

The Jeanes Hospital, Fox Chase, Philadelphia, is rapidly taking its place among the leading institutions that treat cancer exclusively.

The hospital was founded by the will of Anna T. Jeanes, a member of the Society of Friends, and is endowed to the extent of \$2,650,000. The value of the grounds, buildings and equipment is over \$1,000,000.

Accommodations are available for 72 patients, who are cared for in single, double, three- and four-bed rooms. No more than four patients are assigned to any one room.

While the hospital is under the management of the Society of Friends, it is non-sectarian as to its patients, and anyone suffering from cancer or who thinks he has a beginning cancer, tumor or ulcer, is eligible for admission.

According to the booklet, a part of the endowment income is used to make possible the admission of some patients at reduced rates or free, and all rates are adjusted in accordance with the ability of the patient to pay.

All types of ambulatory cases are treated in the out-patient department, which is open daily except Sunday from 10 A. M. to 4 P. M.

Dr. Roscoe W. Teahan is Medical Director and Miss Katharine Brown is Superintendent. The hospital was opened in January, 1928, and is equipped with the most up-to-date apparatus for all departments, and is now considered one of the best equipped cancer hospitals in the country

EDITORIAL

DELAWARE STATE MEDICAL JOURNAL

Owned and published by the Medical Society of Delaware. Issued about the twentieth of each month under the supervision of the Publication Committee.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Society are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Manuscript should be sent in typewritten, double spaced, wide margin, one side only. Manuscript will not be returned unless return postage is forwarded.

The right is reserved to reject material submitted for either editorial or advertising columns. The Publication Committee does not hold itself responsible for views expressed either in editorials or other articles when signed by the author.

Reprints of original articles will be supplied at actual cost, provided requests for them is attached to manuscripts or made in sufficient time before publication.

All correspondence regarding editorial matters, articles, book reviews, etc., should be addressed to the Editor. All correspondence regarding advertisements, rates, etc., should be addressed to the Business Manager.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

It is suggested that wherever possible members of the State Society should patronize our advertisers in preference to others as a matter of fair reciprocity.

Subscription price: \$2.00 per annum in advance. Single copies, 20 cents. Foreign countries: \$2.50 per annum.

VOL. I

JUNE, 1929

No. 6

THE AVERAGE HOSPITAL

The research statistician of the American Hospital Association has done the hospital world a great service in analysing the performance of the 676 general hospitals which are institutional members of the association, for the year 1928. The items studied are: cost per patient-day; percentage of occupancy; average duration of stay per patient; average receipts per patient; and percentage of operating receipts to operating disbursements.

The costs per patient day averaged \$5.32, ranging from the lowest of \$1.30, to \$12.45 in the highest. Most of them are close to the average and this regardless of the size of the institution, or of its type of control. There were more extremely low costs than there were extremely high ones, and of the six hospitals reporting a

cost of \$10 or more, five are private and the sixth is a denominational hospital.

The cost per patient-day is, of course, intimately bound up with the percentage of occupancy. The average number of beds occupied was 63.73% of the total. Roughly one-fourth of the hospitals reported an occupancy of less than 50%, and another fourth reported 70% or more, leaving one-half the hospitals with something between 50% and 70%. Here again, the two extremes of highest and lowest percentage of occupancy were seen regardless of the size of the institution or of its type of control.

The average duration of stay per patient was 12.56 days. Approximately one-fourth of the hospitals reported an average of less than 10 days; two-thirds reported 9 to 15 days; or, 90% reported less than 15 days, and 10% reported 15 days or more. The extremely short stays (4-5 days) were found in hospitals regardless of size or type of control, but the extremely long stays (20 days or more) were found chiefly in hospitals controlled by municipal, county or state governments, and in teaching institutions, most of which were well above the average for size, the 14 reporting the longest stays (21 to 46 days) averaging 540 beds as compared to an average for all the 676 hospitals of 181 beds.

The average receipts per patient were \$61.83. Approximately 40% of the hospitals reported average receipts of less than \$50, another 40% reported receipts of \$50 to \$75, and 20% reported receipts in excess of \$75. The extremely low group (8) reported an average of \$14.80, while the extremely high group (7) reported an average of \$238.40. In none of these groups was the average duration of stay given, but since the extremely high as well as the extremely low were found in institutions ranging in size from the largest to the smallest, and with varying types of control, it is safe to assume that the highest and the lowest receipts reported bore a more or less definite relationship to the length of the patient's stay.

Comparing hospital receipts from patients with the disbursements, leaving out of course all income from gifts, annual contributions, and endowment, the 676 hospitals reported the patient

receipts averaged 92.37% of the operating disbursements, leaving an average operating deficit of 7.63%. As would be expected the group that was distinctly "on velvet" so far as meeting expenses was concerned was the private and denominational one, but it was a distinct surprise to learn that the hospitals that reported the lowest income-expense ration were likewise a group of the privately and denominationally owned hospitals. The reason for this is not apparent, since they varied in size from very small to very large; for instance, one private hospital of 215 beds showed operating receipts that were 185% of the operating disbursements, while another private hospital of 312 beds had an operating income of only 39% of its operating expense. In this latter case the interesting question arises as to who "puts up" the 60% operating deficit: we know of any number of hospitals that are looking for some such "angel."

The total number of patients treated in these 676 hospitals in 1928 was 2,265,865, an average of 3353, and in their behalf there was expended the sum of \$151,734,249.79, an average of \$207,339.13 per hospital, or \$66.96 per patient. Since the average receipts were \$61.83 it is evident that the non-operating income had to provide \$5.13 per patient, which is equivalent to the deficit of 7.63%, as derived above.

To summarize, then, when a patient entered the hospital in 1928, he was one of the 3353 who entered an institution of 181 beds, 63.73% of which were occupied; he stayed 12.56 days at \$5.32 per day, and on leaving paid a bill of \$61.83, we hope cheerfully and gratefully.

MEDICO-LEGAL ROT

We learn from the press that a California court has awarded \$1500 damages to a lady of that "balm'y state because she got fat, *after* an accident. What a pity she did not get the full \$10,000 sued for, for adiposis exaggarata is worth \$10,000 to any dame whose svelte figure and chic gowns are mere memories. But the reason ascribed for both the corpulency and the suit illustrate once more the utter ridiculousness of the law, all too often, when it comes to things medical.

In the instant case, the lady was crossing the bay (or was it the bar?) on a ferry, and in making the slip the boat suddenly careened sideways, whereupon the lady also slipped, and, as

seriously alleged in court, "jarred her thyroid and pituitary glands," with the result that within a few months she steadily augmented her figure, changing from a mere princess into a veritable dowager. Since she was in her early twenties, a long and happy life was converted into a long and miserable one, rendered more heinous by the fact that when corporeal rotundity advanced facial beauty retreated, even to the point where the Market Street cosmetics could not save the situation. And so she sued the ferry company, and the learned (?) judge allowed twelve men to give her \$1500 of ferry money.

And that's no fairy tale!

But figure it out, if you can. We were always under the impression that the thyroid and pituitary glands were antagonistic to each other, so far as lipomatous ladies are concerned, but evidently in this case the jolt seriously depressed the thyroid activities and markedly stimulated the pituitary ones! It even had a selective action on the anterior lobe!! But the practical point is: She brought her nonsensical argument into court, and got away with it.

New York is on the other side of the country, but her courts are no better, when it comes to medico-legal cases. Witness the arrest and trial of the physicians connected with the birth control clinic there, because in the legitimate pursuit of their practice they offered contraceptive advice to a woman who needed it badly, even if she was planted as a decoy. And in this case the learned (?) judges said the clinic should have verified the woman's statement that she was married!

Halfway between California and New York is Texas, and Texas "takes the cake" for medico-legal nonsense. We had occasion some years ago to refer to the case there wherein the learned (God save the mark) judge solemnly decreed that salpingitis was a disease common to *men*! And on the strength of such an hallucination he ordered the payment of certain contested insurance funds. Rack your brains as you will, a more assinine judgment could not be conceived.

There must be some change wrought in our legal processes so that these farces can be enacted no longer in our courts. We believe the system of employing medical witnesses by each side, paid by each side, and unfortunately partial sometimes to the side that pays them is at fault.

Some of these witnesses qualify as experts, and are presumably then worth more, but seldom actually are. Many of the better class among the legal profession decry the custom, and have proposed that in all medico-legal cases neither side be allowed to retain medical counsel, but plan to have the court appoint a medical board, probably of three outstanding practitioners or experts, who alone shall examine and testify, and be paid by the court. We believe this would work out satisfactorily; at any rate, nothing could be worse than the present system.

EDITORIAL NOTES

Now that summer is here, and vacation plans are in the making, we feel like turning Bolsheviki, and employing the

Bolsheviki Higher Mathematics

Each year has	365 days
If you sleep 8 hours a day, it equals	122 days
This leaves	243 days
If you rest 8 hours a day	122 days
This leaves	121 days
There are 52 Sundays	52 days
This leaves	69 days
If you have Saturday half-holiday	26 days
This leaves	43 days
If you have 1½ hours for lunch	28 days
This leaves	15 days
Two weeks vacation	14 days
This leaves	1 day
This being Labor Day, no one works	1 day

The hospital number of the Journal of the American Medical Association (May 30, 1929), lists the valuable hospital of Dr. Frederick M. Allen, at Morristown, New Jersey, as a "psychiatric" one. Since Dr. Allen is one of the nation's outstanding investigators in cardio-renal diseases, diabetes, and other disorders of metabolism, he must be pained to find his Psychiatric Institution branded as crazy. Our deepest sympathy and condolences to Brother Allen.

"Be a snob." So says the erudite professor at Boston Tech. And he said afterwards that he really meant it. It's dollars to doughnuts he does not hail from Boston, at one time one of chief breeding grounds for snobs. Even Boston found that snobbery didn't "get by," and the

true Bostonese are glad it has gone by. We really believe the dear professor has missed both his cue and his locale, but something seems to tell us his next pean will be the old ditty:

Here's to the town of Boston,

The home of the bean and the cod;

Where the Cabots speak only to Lowells,

And the Lowells speak only to God.

We rejoice to learn that the Trustees of the American Medical Association are laying their plans for a new building to house the activities of the Association. The present building looks like a factory on the outside, and resembles a sweat shop on the inside. When they, or better, when *we* rebuild, let it be done in a manner and on a scale that benefits a scientific organization, and the largest and most powerful medical society in the world. The profession will not raise the cry of extravagance if the plans provide for something really worth-while. And our Chicago medics won't have to point guns at 90,000 doctors to get the money, either.

BOOK REVIEWS

NEW AND NONOFFICIAL REMEDIES, 1929, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1929. Cloth. Price, postpaid, \$1.50. Pp. 488; xlviii. Chicago: American Medical Association.

This book offers a solution to the problem of the busy physician who is daily importuned by "detail" men to try the thousand and one new preparations brought out by enterprising manufacturers of pharmaceuticals. If the preparation in question is not described in New and Nonofficial Remedies, it is quite safe to refuse to try it no matter how alluring the salesman's talk. The book contains descriptions of those new preparations which, after painstaking examination, the Council on Pharmacy and Chemistry has found worthy of recognition and of trial by the medical profession. It is revised each year to bring it up to date with the best medical thought and to include the new preparations that have been recognized during the year as well as to delete those which have been found not to live up to their promise of therapeutic value.

A new departure in this edition is a list of "exempted" articles. This comprises some hundred and thirty medicinal and non-medicinal

products examined by the Council and found to be of such composition and to be so marketed as not to require acceptance or rejection by the Council under its rules.

A section of the book (brought up to date each year) gives references to proprietary articles not included in New and Nonofficial Remedies. This list, in conjunction with the book proper constitutes a cumulative index of proprietary medicines, which physicians may consult when a proprietary product is brought to their attention. Physicians cannot dispense with the use of the newer remedies that are brought out each year; yet they can neither judge them on the basis of the manufacturers' claims nor have they the time or means to determine their merits for themselves. For this reason, every physician should possess a copy of this volume, which annually puts at his disposal an authoritative, up to date, and unbiased estimate of these preparations.

THE SEXUAL QUESTION. By August Forel, M. D. Second Edition. English adaptation by C. F. Marshall, M. D. Cloth pp. 536, with 22 illustrations. Price, \$5.00. Brooklyn: Physicians and Surgeons Book Company, 1928.

Forel in his book *The Sexual Question*, attacks the subject in an interesting and scientific manner. He gives a brief discussion of the physiology of sex and of pregnancy. Although he shows a somewhat idealistic conception of matters relating to the subject, there still remains a deep understanding and sympathy for those individuals who are afflicted with psychic abnormalities. He manages to separate his book from personal feelings concerning the matter at hand. Case records are few, and the entire book is more devoted to a scientific discussion and description of sexual matters, both abnormal and normal. He advances a charitable sentiment in his discussion of the legal question, that man has no right to interfere in personal matters concerning the sexual life of others unless a third person is definitely harmed. He also advocates sterilization of such individuals suffering from abnormalities to prevent any hereditary taints. It is a book well worth reading by all physicians because of its detailed discussion of all subjects about which too little is known, and towards which the average man holds an unjust prejudice, thus defeating the chance of helping those who come for treatment. We feel that the book is one of the best written on this subject.

PSYCHOPATHIA SEXUALIS. By R. von Krafft-Ebing, M. D., Professor of Psychiatry, University of Vienna. Revised Edition. English adaptation by F. J. Rebmar. Cloth pp. 617. Price, \$5.00. Brooklyn: Physicians and Surgeons Book Company, 1928.

An impartial, unbiased treatise on sexual pathology is hard to find. When such a writer is discovered one feels that the subjects which are generally tabooed can be read (when written by the hand of such an individual) with a kindly feeling towards such people who have made unfortunate adjustments, due either to congenital abnormalities or to environment. Among such writers we would first point to Havelock Ellis and Edward Kempf. Krafft-Ebing in his famous book *Psychopathia-Sexualis* gives us an excellent discussion of sexual abnormalities, and presents many concise case records of which the greater part of his book is made up. His style is clear and very readable. However, one balks a bit at his use of the terms will power and strong character. One feels through the entire book that the author is a bit inclined to look with slight disgust at the situations which he describes. However, he covers the subjects very completely. The case records well describe all forms of sexual pathology. The book is well worth reading for those working in this field, but is rather detailed for the general practitioner.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL OF PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1928. Cloth. Price, postpaid, \$1.00. Pp. 75. Chicago: American Medical Association, 1929.

This book is a great deal more than a mere record of the negative actions of the Council on Pharmacy and Chemistry. It gives in full the reasons for the Council's rejection of various preparations, but it also records results of the Council's investigations of new medicinal agents not yet out of the experimental stage, and frequently contains reports on general questions concerned with the advance of rational drug therapy. All three categories of reports are represented in the present volume.

Among the preliminary reports are those on Metrazol, which has now been admitted to New and Nonofficial Remedies; on Phenylaminoethanol sulphate, a newly synthesized ephedrine substitute; on Ovarialhormon Folliculin Menformon, the ovarian preparation originated by Dr.

Iacqueur of Amsterdam; and on Heparhone, a liver preparation.

The special report dealing with dextrose solutions containing cresol and intended for intravenous administration is a noteworthy example of the third category of Council reports we have mentioned.

MISCELLANEOUS

Fever Induced by Bacterial Proteins in Treatment of Syphilis

JAROLD E. KEMP, Baltimore, and JOHN H. STOKES, Philadelphia (*Journal A. M. A.*, May 25, 1929), found it possible to administer fever therapy by means of mixed typhoid-paratyphoid vaccine to sixty-five patients, an average temperature response of 103.6 F. and, under a better dosage technic, of 104.2 F., being secured, with a mortality of 1.5 per cent. Careful individual adjustment of dosage and the avoidance of treatment in the face of definite contraindications make this a very safe and controllable form of fever therapy. An absolute contraindication is myocardial and advanced cardiovascular disease. Relative contraindications include arteriosclerosis, pulmonary disease and marked grades of focal infection. Diabetes, nephritis and chronic arthritis are not necessary contraindications under proper treatment control. There are no important changes in the chemical status of the blood other than a rise in blood sugar, which in diabetic patients can be controlled by insulin and diet. Second courses of treatment can be given in the absence of contraindications. Fever therapy can be combined with the administration of arsphenamine or tryparsamide at the height of the fever, to take advantage of any possible increase in the permeability or reactivity of the tissues without special unfavorable effects in the group of patients observed. Fever therapy alone will cause involution of primary and secondary manifestations, but as a method of treatment it is markedly inferior to arsphenamine. Fever therapy combined with arsphenamine therapy and followed by arsphenamine and bismuth offers a somewhat more satisfactory therapeutic outlook than routine arsphenamine and bismuth therapy alone. A group of approximately 46 per cent of apparently irreversible blood Wassermann reactions in various stages of syphilis were reversed by fever therapy and by fever and arsphenamine therapy combined. The permanence of the results cannot yet be determined but the outlook under a continuance of routine treatment seems good. Interstitial keratitis (two cases), gastric crisis (two cases), and severe persistent lightning pains (two cases) responded well to fever or to fever and arsphenamine. Primary optic atrophy (four cases) when advanced does not show any response to this method of treatment. Tryparsamide administered once weekly simultaneously with the rise in temperature produced by a weekly protein injection appears to be a method of treatment deserving further study. Striking clinical and serologic response was secured in two cases and moderate response in a third following twenty weeks of this form of treatment. Bacterial protein therapy alone or in combination with arsphenamine or tryparsamide is capable of producing marked serologic as well as clinical improvement in neurosyphilis.

Cavernous Hemangioma of Vertebrae

PERCIVAL BAILEY and P. C. BUCY, Chicago (*Journal A. M. A.*, May 25, 1929), report a case of cavernous hemangioma of the third, fifth and sixth dorsal vertebrae with compression of the cord. The patient is the second to have been operated on successfully.

Proper Shoeing of the Child

JOHN D. ADAMS, Boston (*Journal A. M. A.*, May 25, 1929), insists that parents should be educated not only with regard to the proper type of shoe to be worn by the child in early life but also in an intelligent understanding of its construction, and of the reasons why the growing foot should be respected in its anatomic development. The first shoe should emulate a paper bag, possessing just enough shape to make it possible to designate it as a shoe. Its material should be soft white kid with a flexible unresisting sole, with a draw string of tape at the top. Its function should simply be that of a protecting covering. Between the ages of 2 and 5, the child should have something a little more substantial as a protection. There are seven vital and essential points to be incorporated in what might be termed the "ideal seven point shoe": 1. Breadth of toe. The shoe should be sufficiently broad to allow the toes to assume a natural uncompressed weight-bearing position. 2. Length. All shoes should be at least one-half inch longer than the weight-bearing foot. 3. Depth and Fullness of the toe. 4. Close fitting well shaped Heel, tapering at the top to fit the natural conformation of the os calcis. 5. Depth from the vamp at the dorsum of the foot over the midtarsus to the sole. Depth and fullness are necessary here, not only to accommodate the normal fullness in the contour of the foot but also to allow freedom of action in foot mechanics, in raising on the toes in the act of walking. There must be a lack of constriction at this point to allow a proper bearing and leverage of the toes. 6. Broad flexible sole, with a straight outside bearing from the tip of the little toe to the width of the heel. 7. Height of the heel. Starting with the "paper bag shoe," up to the age of 3½ years, the child's shoe should not have a heel any thicker than the sole. From 3½ years up to 5 years, the heel should be twice as thick as the sole.

Roentgen Irradiation in Treatment of Hyperthyroidism

A statistical evaluation of roentgen irradiation in the treatment of hyperthyroidism based on 305 cases is made by T. A. GROOVER, A. C. CHRISTIE, E. A. MERRIT, F. O. COE and E. M. McPEAK, Washington, D. C. (*Journal A. M. A.*, May 25, 1929). In this series there were twenty-six cases in which a thyroidectomy had previously been performed, without improvement, with incomplete relief, or with recurrence of toxicity. The results of treatment were: cured of hyperthyroidism, 271, 88.85 per cent; improved, twenty-six, 8.52 per cent; unimproved, eight, 2.63 per cent. One of the most reliable criteria for judging progress in cases of hyperthyroidism is the weight curve. The greatest gain in any single case of their series was 80 pounds (36 Kg.). One of the criticisms that have been made with respect to the irradiation of hyperthyroidism has been the length of time required to gain improvement or to effect a cure. On an average, 6.6 treatments per patient were administered in this series of cases, and generally 2.7 treatments were given before improvement was first noted. As cases are treated at intervals of three weeks, it is apparent that the average duration of treatment was less than five months and the average lapse of time before improvement began was approximately two months. The authors have not been able to determine from their records the average loss of time from work by the patients of this series, but they have every reason to believe that the economic loss from this source has not been greater than with any other adequate method of treatment, and, on the whole, has probably been less. In this series symptoms of hyperthyroidism on an average antedated the beginning of roentgen treatment more than two years. While the facts and figures given do not justify any final conclusion as to the permanence of cure following roentgen therapy, they at least indicate that results

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in this regard are quite as satisfactory as with any other method. Among the factors which have contributed to failures to cure hyperthyroidism by radiation therapy, are the following: (1) overwhelming toxicity; (2) serious cardiovascular or other visceral changes, and (3) non-cooperation on the part of the patient or the attending physician. As twenty-six patients had had previous thyroidectomies without cure the results of roentgen therapy in this group are slightly more favorable than they are for the entire series, but the difference is not sufficient to be regarded as significant. Five deaths have occurred in the group of 271 cases recorded as cured of hyperthyroidism, as follows: organic heart disease, two; cerebral hemorrhage, one; tuberculous laryngitis, one; unknown, but not due to hyperthyroidism, one. Telangiectasis of the skin is a sequel of roentgen therapy that needs always to be kept in mind. It occurred in six cases, mostly in cases in which there was a departure from the standard technic as to dosage.

The Hospital Staff Conference

The staff conference, both as a subject of deliberation and as a hospital function, presents a wider variety of interest than would seem possible on first thought asserts FRANK J. SLADEN, Detroit (*Journal A. M. A.*, May 11, 1929). It probably is not necessary to point out that the hospital staff conference, introduced as a part of the minimum standard for approved hospitals, was arbitrary and exacting in its original form, its function being defined as review and analysis of clinical cases. The character of staff meetings inevitably varies with the type of hospital. At one end of the line is the university hospital, at the other the small hospital with a small visiting staff and few or no interns. In the large city hospital, meetings have for years been striving ambitiously for definite goals, and the tendencies now finding national expression are there being welcomed as aids to the ends we are seeking. Sladen agrees that recent progress suggests that the possibilities of the hospital have not yet been generally and fully appreciated, and are now only at the beginning of their development. As an institution the hospital should hold a commanding position in the community. Each individual on the staff should contribute to this by knowing and upholding the position he is supposed to fill in the institution. The hospital should put its imprint on every man on its staff and every man in turn should be an expression of the hospital to the public with whom he has contact. The staff conference must be the cohesive factor, dominating the field of the department or hospital. Everything else must rotate about it or originate in it. It must be the main function of a staff as an organized whole, either departmental or institutional. In it should be found the source of the efficiency and idealism in professional, cultural, moral and economic principles which are fundamental today in both institutional and community life. The presentation of a case or of cases has been the headliner of all these conferences; it would be a reduplication to refer to any great number of the methods of presenting cases. Sladen suggests: First, if cases from every ward are scheduled for the clinic, and no one knows which will be shown until just before the hour, the preparation becomes a benefit to many more men and general interest and expectancy are aroused. Second, if every one who has had contact with the case is called on in the conference, from the intern on the ambulance to the consultant, the interest and expectancy are maintained. Third, completeness of presentation determines the extent of the discussion. Discussion is aided by outlines on blackboards. Discussion crystallizes or modifies criteria. A forum is provided for sharpening medical wits. Experience is converted into concrete usable form. Another fundamental of a professional nature is the requirement of respect for records and routine procedures, which will be reflected in the staff conference. In fact, the staff conference will become a school of ethics. Through these conferences, also, many supplementary hospital activities may be brought

into their proper relationship to diagnosis and treatment. The cultural principle is preserved in a regard for general educational standards. The king's English should be kept alive in writing and speech, and care should be given to the form of the presentation and to the development of ability to think on one's feet. The history of medicine should not be overlooked any more than current literature, new books and acquaintance with library usage. The maintenance of a high level of morale is one of the most difficult of hospital problems. A certainty of accomplishment inspires and stimulates interest and enthusiasm in work. Examples of devotion to purpose have enormous value and do much to encourage self-effacement and unselfishness. Economic principles demand definite orientation in the minds of every staff member as to his place in the organization and in the community. The first essential to efficient organization is information. Adequate leadership is also a requirement for success; if full attendance is obtained, proper leadership can accomplish the rest. The foundation work must be done in the universities and especially in the medical schools. If the students are brought up on staff conferences and gain some conception of organization, policies and operation, they will appreciate and support such conferences after graduation and many will develop the necessary qualities of leadership. The very conference itself, once well accepted, will produce its leaders. Since it is not always possible to bring discussion to a satisfactory conclusion within a given time limit, it is sometimes of advantage to bring up at a conference a subject left unclarified the previous week. The ideal conference subject is one in which each man present can feel a possessive share, and one which will not be exhausted in the conference but will provide food for future thought. The hospital staff is composed of a large group of men by whose personality, work and contacts success or failure is determined. Some are eager to gain clinical experience and institutional sense; some are already experienced clinically but must be awakened to institutional responsibilities. The man who is close to what is going on, who carries real responsibility, who understands the reasons for institutional policies and actions, is the man with the higher morale and more vital interest. The medical graduate must have received the right seed in medical school, where he will have observed a practice he should imitate and will have received some understanding of the economic activities of a hospital and his place in it, and the places occupied by those senior to him. The demand in this day and age lies in the desire to keep the interest and confidence of the lay public. The able department head is successful in connecting this demand with the principles of departmental success. He is able to make the staff conference serve a dual purpose as a part of the institutional administration, based on sound economic principles, and as the means through which his department is to reach its highest professional aims.

Loose Body Under External Semilunar Cartilage of Knee

EMIL S. GEIST, Minneapolis (*Journal A. M. A.*, May 25, 1929), reports two cases. In removing the loose body it was not necessary to injure the external semilunar cartilage or its attachments. In the first case the loose body could quite easily be "swept out" with a stout piece of wire bent on itself at its end in hooklike fashion. In the second case, this method failed and the loose body was "milked out" by pressing on the cartilage and grasping the body when it presented below the edge of the semilunar cartilage. He concludes that these cases, doubtless, were examples of osteochondritis dissecans. No search was made to locate the area from which the loose bodies had been extruded, and no attempt is made to explain the mechanism by which these loose bodies find lodgment under the external semilunar cartilage, or to explain the symptoms.

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